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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,175	08/10/2001	Robert A. DiChiara JR.	7784-000171	4647

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EXAMINER

CHEN, BRET P

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 09/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/927,175

Applicant(s)

DICHIARA, ROBERT A.

Examiner

B. Chen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-14, 26-36 and 39-42 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 9-14, 26-36 and 39-42 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Claims 9-14, 26-36, 39-46 are pending in this application. Newly added claims 43-46 are noted.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 9-14, 26-33, and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over DiChiara, Jr. et al in view of Kourtides et al for the reasons listed in the previous office action.

Claims 34-36, 39-41, 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over DiChiara, Jr. et al in view of Kourtides et al and Baker et al for the reasons stated in the previous office action.

Newly added claims 43-46 require that the boron compound does not produce an acid that can attack the ceramic body and that the boron compound be a specific material. It is noted that Baker specifically teaches boron carbide. It is the examiner's position that the limitation of the specific boron material is met and that the property is inherently present in the specified boron material.

Response to Arguments

Applicant's arguments filed 8/13/04 have been fully considered but they are not persuasive.

Applicant first argues that the prior art references as a whole do not teach a method for increasing the temperature stability of a porous body (claim 9) and that the surface protected body can be reheated to 2500oF without cracking (claim 26). Applicant's arguments are solely based on the DiChiara Declaration (pp.9-10).

The DiChiara Declaration dated 8/13/04 states that while the use of emissivity agents in slurries containing silica and cordierite and the use of boron compounds as emissivity agents are well known (paragraph 3). However, the Declarant states that it is not well known to expect boron compounds to improve temperature stability.

The prior art references teach the use of emissivity agents in high temperature ceramics for use in high temperature environment. It is the examiner's position that the prior art does teach that the slurry and the emissivity agents provide improved thermal stability to the ceramic substrate. The Declarant opines that it is not well known to expect boron compounds to improve temperature stability but provides no factual evidence or data to support his position. The argument provided is not deemed persuasive.

The DiChiara Declaration also states that most boron compounds can be utilized in the present invention (paragraphs 7-14).

It is noted that while the Declarant opines that most boron compounds can be utilized in the claimed process, no factual evidence is provided to support his position. The only evidence of record recited is boron carbide and the specific substrate material. Specifically, there is no evidence supporting the position that all boron materials can be utilized. The argument provided is not deemed persuasive.

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However, it should be noted that the Declarant states that the combination of the boron with the silica sol/cordierite mixture works at a higher temperature than it did in the prior art (paragraph 11). If the present claims were to be amended to recite the limitation of a boron/silica ratio and the higher temperatures, the examiner will consider withdrawing the art rejection.

The arguments provided in the amendment and the DiChiara Declaration have been considered but are not deemed persuasive.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to B. Chen whose telephone number is (571) 272-1417. The examiner can normally be reached on 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bc
9/11/04



BRET CHEN
PRIMARY EXAMINER